

CLAIMS

1. (Previously Presented) A process for automatic determination of the alkalinity of one or more cleaning baths containing surfactant the process comprising the following steps, performed under program control,

(a) drawing a sample of specified volume from a cleaning bath,

(b) determining alkalinity of the sample using the acid-base reaction with an acid, the determining step being performed by a measuring device,

(c) outputting the result of step (b), and

(d) adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value.

2-14. (Cancelled)

15. (Previously Presented) The process of claim 1 further comprising the step of removing solids from the sample prior to the step of determining alkalinity.

16. (Previously Presented) The process of claim 1 wherein free alkalinity is determined in the step of determining alkalinity.

17. (Previously Presented) The process of claim 1 wherein total alkalinity is determined in the step of determining alkalinity.

18. (Previously Presented) The process of claim 1 wherein the step of determining alkalinity comprises titrating the sample by addition of an acid.

19. (Previously Presented) The process of claim 1 wherein the step of determining

alkalinity comprises titrating an acid by addition of the sample.

20. (Previously Presented) The process of claim 1 wherein the step of outputting comprises displaying the result of step (b).

21. (Previously Presented) The process of claim 1 wherein the step of outputting comprises storing the result of step (b) on a data carrier.

22. (Previously Presented) The process of claim 1 wherein steps (a) through (c) are automatically repeated after a specified time interval.

23. (Previously Presented) The process of claim 22 further comprising the step of adjusting the duration of the specified time interval based on a comparison of the results of step (b) on consecutive drawn samples.

24. (Previously Presented) The process of claim 1 further comprising the step of inputting an external request to initiate steps (a) through (c).

25. (Previously Presented) The process of claim 1 further comprising determining the alkalinity of one or more standard solutions.

26. (Previously Presented) The process of claim 25 wherein steps (a) through (c) are automatically repeated after a specified time interval and the step of determining the alkalinity of one or more standard solutions is initiated if the results of step (b) on two consecutive drawn samples differs by a preselected value.

27. (Previously Presented) The process of claim 25 further comprising the step of outputting the result from the step of determining the alkalinity of the one or more standard

solutions.

28. (Previously Presented) The process of claim 25 wherein steps (a) through (c) are automatically repeated after a specified time interval and further comprising one or more steps selected from the group consisting of

analyzing the results of a plurality of alkalinity determinations,

automatically terminating the process,

activating a detectable signal, and

adjusting operation of the measuring device.

29. (Previously Presented) The process of claim 1 wherein the step of determining alkalinity is conducted using a pH-sensitive electrode.

30. (Previously Presented) The process of claim 1 wherein the step of determining alkalinity comprises measuring pH-dependent interaction with electromagnetic radiation.

31. (Previously Presented) The process of claim 1 wherein the step of determining alkalinity comprises monitoring changes in one or more properties selected from the group consisting of color, refractive index and electrical conductivity.

32. (Previously Presented) The process of claim 1 further comprising the step of automatically determining the level of one or more reagents.

33. (Previously Presented) The process of claim 32 further comprising the step of activating a detectable signal in response to a determination of a preselected level of one or more reagents.

34. (Previously Presented) The method of claim 1 further comprising the step of transmitting the result of step (b) to a remote location.

35. (Previously Presented) The process of claim 1 further comprising the step of automatically adding one or more pH-adjusting components into the cleaning bath in response to the result of step (b) being a preselected value.